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ABSTRACT

The intent of this paper is to provide the information necessary to develop and implement an acceptable asbestos removal plan. The information is taken from current (September 1980) federal and state regulations and recommendations. The information describing asbestos removal operations is organized chronologically to simplify using this document as a guide in a step-by-step program for asbestos removal or encapsulation. Topics discussed include necessary notifications, permits, protective clothing and equipment, employee training, respirators, environmental air monitoring, medical examinations, record keeping, documentation, building occupancy, pre-renovation meetings, work area preparation, personnel decontamination, methods of asbestos stripping, and asbestos disposal. The appendices contain a letter from the state of New Jersey concerning encapsulation of asbestos; a list of 30 approved asbestos respirators and manufacturers' names and addresses; respiratory publications available; a suggested schematic representation of a typical decontamination unit for asbestos removal; and a list of asbestos resource personnel and contractors. (MLF)

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ASBESTOS ABATEMENT IN OKLAHOMA SCHOOLS

I. INTRODUCTION

A. General

During the last two years there has been a dramatic increase in the concern over the potential health hazards due to human exposure to low levels of asbestos dust. At this time no level of exposure can be shown to be completely free of risk.

In response to public pressure to take the lead in developing a solution to the asbestos problem in schools, the U. S. Environmental Protection Agency (EPA) developed guidelines in 1979 for asbestos detection and corrective procedures, incorporating the existing regulations of the U. S. Occupational Safety and Health Administration (OSHA). Currently EPA is developing regulations requiring both detection and correction programs. The detection regulations have been postponed to coincide with those associated with the U. S. Congressional Grant and Loan Program passed as Senate Bill 1658 in June 1980. The EPA detection regulations, along with the regulations for Senate Bill 1658, are expected sometime in September 1980, whereas the EPA regulations on corrective actions are expected early in 1981.

B. Purpose of Document

The intent of this paper is primarily to provide the information necessary to develop and implement an acceptable asbestos removal plan. The information is taken from current Federal and State regulations and recommendations, and is current as of September 1980. Although most of the following procedures are required by law for only removal at this time, the EPA does recommend that essentially the same procedures be used for encapsulation.

The following flow of information describing asbestos removal operations is intended to be as close to actual chronological events as possible. This process should simplify using this document as a guide in a step by step program for asbestos removal (or encapsulation). It is assumed that any school utilizing this paper will have already completed the steps of inspection, sampling, sample analysis and exposure assessment as outlined in the EPA Asbestos-Containing Material in School Buildings Guidance Documents, Parts I and II and the State Health Department's papers on Exposure Assessment Algorithms and Guidelines for Preparation of an Asbestos Correction Plan.

C. Corrective Actions Available

If the presence of sprayed friable asbestos-containing material is confirmed in a facility, the building owners usually have four possible alternatives:

1. Remove the material
2. Encapsulate (seal) the material
3. Contain (enclose) the material
4. Defer action

The EPA Guidance Documents discuss some of the reasoning behind selecting each of the above options. Also, the algorithm on exposure assessment developed and being used by the Oklahoma State Health Department is designed to assist decision-makers in selecting the most appropriate option in each area containing asbestos.

It appears at this time that regulations being developed by Federal agencies will require management and/or record keeping programs for every option selected. As long as sprayed friable asbestos is located somewhere in a building, records will be required, describing its location and indicating how it is being monitored and controlled. If asbestos has been removed, school records should confirm this action also. In addition, the new regulations may require removal under certain circumstances. This means that the decision to remove a bad exposure problem (before the regulations are out in 1981) will probably be upheld later but a decision to do anything else may not. This presents a real dilemma for many school districts whose available bonding capacity prohibits their raising enough money to remove asbestos, the most expensive option available. Unfortunately, the new Federal Grants and Loans Program does not qualify Oklahoma Public Schools.

D. Cautions

There seems to be little question among health authorities that exposure to asbestos fibers in the air is hazardous to health- the more the exposure, the more the hazard. Therefore, asbestos-containing material should never be disturbed in any way that will create fiber release without first isolating the area and protecting the workers with appropriate respirators and special clothing. If corrective actions are not taken properly, contamination can be increased substantially, and remain for some time since the asbestos fibers are very aerodynamic.

Substantial contamination can be generated by containing and encapsulating, as well as removing asbestos. The following specifications for removal should be reviewed before disturbing asbestos-containing material by enclosing or sealing it. The ideas presented here will emphasize the various problems that can be generated as a result of disturbing asbestos fibers. Because of the impending regulations and the many disadvantages to encapsulating, at least one state (New Jersey) has suspended sealing activities completely until further notice. (See Appendix A).

II. Minimum Asbestos Removal Specifications

A. Preliminary Activities

1. Notifications

In compliance with Section 61.22 (d)(2) of 40 CFR, Part 61, the contractor shall notify the regional U. S. Environmental Protection Agency (EPA) by a letter post marked at least 10 days prior to the start of any asbestos renovation project. EPA will automatically notify the Occupational Safety and Health Administration (OSHA). The notice should be sent to:

Martin Brittain, Enforcement Division
USEPA 1201 Elm Street
First International Building
Dallas, Texas 75278
(214) 767-2755

A copy of this letter should also be sent to:

Bob Martin, Administrator
School Plant Services
State Department of Education
2500 North Lincoln Boulevard
Oklahoma City, Oklahoma 73105

and

Dale McHard, Chief
Occupational and Radiological Health Services
Oklahoma State Department of Health
P. O. Box 53551
Oklahoma City, Oklahoma 73152

The notification shall include the following information:

1. Name and address of the contractor.
2. Address and description of facilities, including size, age and prior use of the facilities, and the approximate square footage of friable asbestos material present.
3. Scheduled starting and completion dates for renovation.
4. Methods to be employed during renovation.
5. Procedures to be used to comply with this EPA regulation
6. The name and address of the waste disposal site where the asbestos will be taken.

2. Permits

Permits for asbestos hauling trucks and disposal sites can be obtained from:

Donald Hensch, Director
Industrial Waste Division
Industrial and Solid Waste Services
Oklahoma State Department of Health
P. O. Box 53551
Oklahoma City, Oklahoma 73152
(405) 271-5338

Currently approved disposal sites are available from Mr. Hensch.

The following two approved asbestos disposal sites are the only ones currently in or close to Oklahoma at this time (September 1980):

A) U. S. Pollution Control, Inc. (Office Address)
2000 Classen Center
Suite 320 South
Oklahoma City, Oklahoma 73106
(405) 528-8371

The U. S. Pollution Control Site address and location is:

Lone Mountain Site
Route 2 - Box 180A
Waynoka, Oklahoma 73860

(Located 5 miles east and one mile north of junction of state highways 15 and 281)

B) Kansas Industrial Environmental Services, Inc.
8808 N. 127th St., East
P. O. Box 745
Wichita, Kansas 67201
(316) 744-1286

3. Protective Clothing and Equipment

The contractor shall provide and require the use of coveralls or similar whole body clothing, head coverings, gloves, foot coverings and respirators for all employees and officials from the school or state who have a need to inspect the contaminated areas.

4. Employee Training

Training shall be provided for all new workers and should include such subjects as the use of respirators and protective clothing, the health hazards and decontamination of asbestos, the appropriate EPA, OSHA, and SDH regulations, and the emergency evacuation plan. The contractor shall provide the school administrator with documentation of appropriate employee training.

5. Respirators

a. Only persons who can wear respirators without jeopardizing their health should be hired as asbestos workers.

b. OSHA requires the use of Class C respirators unless the employer can prove the contamination level will always be less than 100 times both the maximum exposure limit of 10 fibers per cubic centimeter (f/cc) and the 8 hour time weighted average (TWA) of 2 fibers per cubic centimeter (2f/cc). For specific requirements in your area, contact your area OSHA office.

c. OSHA regulations section 1910.1001 (d)(2) require specific respirators based upon known exposure limits.

d. Appendix B contains a list of NIOSH approved respirators for asbestos, along with the addresses of the manufacturers.

e. A list of some respiratory publications available can be found as Appendix C.

6. Environmental Air Monitoring

One air sample inside and one outside the work area is recommended before starting the project. All air sampling before, during and after the renovation should be done in the breathing zone of a worker, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder per OSHA regulations paragraph 29 CFR 1910.1001 (f)(2)(i). Some air sampling equipment manufacturers are listed in EPA Guidance Document, Part II, Appendix J.

7. Medical Exams

Free medical exams must be provided asbestos workers within 30 days of their first day at work. They should be performed, preferably, before the first work day. Annual exams, as well as job termination physicals, are also required.

8. Record Keeping

Records on each asbestos worker shall be developed and maintained with the following information for at least 30 years:

a. All medical exams.

b. All personal and environmental air monitoring analyses.

9. Documentation

The contractor shall post the following information at the job site, and have available at the contractor's business office:

a. OSHA Regulations, Sections 1910.145 (d)(4) and 1910.1001 of 29 CFR.

b. EPA Regulations, Subpart B of 40 CFR, Part 61.

c. 10 day advance notice letter to EPA.

10. Building Occupancy

The contractor and the school administration will agree on a mutually acceptable period during which the contaminated portion of the building will not be occupied by school personnel. During this period the contractor will be responsible for the building security and maintaining the existing building and utility systems.

11. Pre-Renovation Meeting

The contractor and representative(s) of the school will meet before any renovation is started and agree upon the following items which will be presented by the contractor:

a. Plan for work site preparation.

b. Delineation of responsibility for work site isolation.

c. Building Occupancy.

d. Type of approved respirators and clothing to be used by workers.

e. Explanation of decontamination plan.

f. Renovation methods used.

g. Procedure for hauling and disposing of asbestos.

h. Air monitoring procedure.

i. Final clean-up procedures.

B. Work Area Preparation

1. Floor Plan for Decontamination

A floor plan sketch of the isolated areas should be made to show the pattern of traffic for workers entering and decontaminating upon leaving. This plan should show work areas, equipment areas, shower, clean room and, asbestos waste removal loading area. A typical suggested schematic can be found as Appendix D.

2. Emergency Evacuation Plan

The contractor shall prepare an emergency evacuation plan for each project. The procedures in this plan will supersede any other procedures in case of an emergency..

3. Inspection of Isolated Rooms

The contractor and school representative should inspect all areas to be turned over to the contractor before any work begins. An inventory of all damaged furniture, fixtures, etc. should be made.

4. Caution Signs and Labels

OSHA approved caution sign shall be placed both inside and outside of each contaminated area. See OSHA Standards 1910.145 (d)(4) and 1910.1001 (g)(1) for details. OSHA approved caution labels shall be placed on all plastic bags and other containers in which loose asbestos fiber waste material is being stored. See OSHA Standard 1910.1001 (g)(2) for label specifications. OSHA approved signs, labels, or tags can be purchased from Fire and Safety Companies.

5. Ventilation

All heating, air conditioning and ventilating ducts shall be sealed off completely in all contaminated areas.

6. Removable Equipment

The contractor shall wet-clean or vacuum with a High Efficiency Particulate Absolute (HEPA) filter, all items which can be removed without disrupting the asbestos material. These items shall be removed from the work area and returned after area has been decontaminated to the satisfaction of the building owner. Cleaning cloths shall be disposed of as contaminated materials.

7. Isolation of Contaminated Areas

Approved air locks of 6 mil plastic sheeting shall be built for entrances to all isolated areas. See sketch in Appendix D for details.

Additional removable items which will disrupt the asbestos material may now be disconnected, wet-cleaned (or HEPA vacuumed) and removed.

8. Non-removable Equipment

All non-removable equipment such as clocks and fixtures shall be wet-cleaned (or HEPA vacuumed) and covered with plastic.

9. Wall and Floor Protection

Walls and floors in all contaminated areas except the shower room shall be covered with plastic (at least 4 mil on walls and 6 mil on floors). All windows, vents, etc, should be covered.

10. Toilet Facilities

Adequate toilet facilities should be provided in the equipment room to avoid decontamination for this purpose.

11. Filter Exchanges

The contractor shall remove all heating, ventilating and air conditioning system filters, pack them in 6 mil (minimum) plastic bags, dispose of as contaminated material and replace with new filters.

C. Personnel Decontamination Sequence

1. The worker enters the clean room and removes clothing, puts on clean coveralls and respirator, and proceeds to the equipment room.

2. Any additional required clothing and equipment left in the equipment room is now put on. Work footwear shall remain in the

equipment room until job completion and should be cleaned at that time. (When the work area is too cold for coveralls only, the worker will usually provide himself with additional warm garments. These must be treated as contaminated clothing and left in the decontamination unit.) There shall be no smoking, eating, or chewing when a respirator is worn. A respirator must be worn in all contaminated areas.

3. Worker proceeds to the work area.

4. Before leaving the work area, the worker should remove all gross contamination and debris from the overalls. In practice, this is usually carried out by one worker assisting another.

5. The worker proceeds to the equipment room and removes all clothing except respiratory protection equipment. Disposable coveralls are placed in a bag for disposal with other material. The worker then proceeds rapidly into the shower room. Respiratory protection equipment should be washed and removed last to prevent inhalation of fibers during removal of contaminated clothing.

6. After showering, the worker moves to the clean room and dresses in either new coveralls for another entry or street clothes, if leaving.

7. Respirators are picked up, cleaned and wrapped by protected workers in a separate area by washing. The old "wet" filter is discarded as contaminated waste and replaced by a new filter. The respirators are then brought to the clean room for re-use.

D. Methods of Asbestos Stripping

1. Wet Spraying

The asbestos material will be sprayed with water containing an additive to enhance penetration. The additive, or wetting agent, will be 50 percent poly-ethylene ester and 50 percent polyoxyethylene ether at a concentration of 1 ounce per 5 gallons of water or equivalent mixture. A fine spray of this solution must be applied to prevent fiber disturbance preceding the removal of the asbestos material. The asbestos will be sufficiently saturated to prevent emission of airborne fibers in excess of the exposure limits prescribed in the OSHA standards referenced in these specifications.

2. Wet Packing

Removal of the asbestos material will be done in small sections with two-person teams, on staging platforms, if needed.

The wet material will be packed into labeled 6-mil plastic bags held within metal or fiber drums prior to starting the next section to prevent the material from drying. Wet clean the drums and place them close to the exit for pickup by protected workers from the outside.

3. Air Monitoring

During the work period, the air shall be monitored at least the minimum number of times indicated in the table below:

Areas to be Sampled	Minimum Number of Samples Per Day	Minimum Volume Per Sample (Liters)
Work Area	2	120
Outside Work Area (in buildings)	1	120
Outside Buildings	1	240

4. Facility Decontamination

a. Wet clean all reusable equipment such as staging platforms and remove.

b. Remove all plastic coverings except on doorways and other opening barriers such as vents. Dispose of as contaminated waste.

c. Wet clean entire work area.

d. After dust settles for 24 hours, wet clean again. During this settling period no entry, activity or ventilation is permitted.

e. Air monitor twice during next 48 hours (minimum sample of 240 liters).

f. If air not decontaminated, wet clean area again and re-monitor air. Repeat, as needed.

g. If air decontaminated, remove remaining plastic coverings.

h. Return removable equipment.

E. Asbestos Disposal

Protected workers will place the clean drums with contaminated materials on an approved truck. The truck must be registered to haul asbestos to a site approved in advance by the Oklahoma Health Department. Each drum and plastic bag inside must be labeled with an OSHA approved caution label. The workers should also be protected at the disposal site while removing the contaminated bags from the drums for disposal. If the bags are broken, the drum should be kept sealed and buried also.

STATE OF NEW JERSEY
OFFICE OF THE GOVERNOR
TRENTON
08625

BRENDAN T BYRNE
GOVERNOR

CABINET COMMITTEE
ON
CANCER CONTROL

TO: Whom It May Concern

FROM: Dr. Ian A. Mitchell, Chairman
Task Force on Asbestos

SUBJECT: Encapsulation

DATE: June 6, 1980

The purpose of this memorandum is to advise you of the current position of the Governor's Task Force on Asbestos regarding the use of control alternatives for eliminating asbestos fiber fall-out from asbestos-containing ceilings which exist in some buildings. In the past, direction on asbestos control has come from both State and Federal agencies in the form of guidance documents.

Emerging from those documents were four (4) alternatives: removal, encapsulation, enclosure and deferred action. Each alternative has advantages and disadvantages.

The use of sealants to encapsulate asbestos fibers in acoustical or thermal insulating ceiling material was thought to have great promise. However, testing, experience and some clear reasoning of experts in the field, have indicated that sealants have only a very limited range of usefulness.

We now have almost five years of experience in dealing with asbestos-containing surface covering materials. That experience indicates that the disadvantages of encapsulation outweigh the advantages.

Additional information and guidance from the Federal government on the use of sealants for asbestos control is anticipated in the near future. Until that information is received and reviewed, it is the opinion of the Governor's Task Force on Asbestos that sealants should not be used to encapsulate asbestos-containing surfaces.

Thank you for your cooperation in this important matter.

I.A.M.

APPENDIX A

IAM:nr:cd

ASBESTOS APPROVED RESPIRATORS

NIOSH has approved thirty (30) respirators for use with asbestos. These respirators are listed on the following pages and are identified by either an "A" or "S" designation under the heading "Type of respiratory protection." There are seven (7) single use respirators, designated by the letter "S". The remainder are permanent respirators with replaceable filters.

All NIOSH-approved respirators have an attached tag which identifies the device as suitable for use in various environments. Those approved for asbestos will read:

- "designed as respiratory protection against asbestos-containing dusts and mists" (Type A)

OR

- "designed as respiratory protection against pneumoconiosis- and fibrosis-producing dusts, or dusts and mists" (Type S)

In addition, the NIOSH approval number will also appear on the label. For example, the NIOSH approval number for 3M Model 8710 is TC-21C-132. (Respirator number 24.)

DUST, FUME, AND MIST RESPIRATORS APPROVED BY MSHA/NIOSH FOR ASBESTOS

PART I: Permanent Respirators with Replaceable Filters

No.	Approval number TC-21C-	Approval Issued to	Model number(s)	Respirator type	Face-piece type	Type of Respiratory Protection D	F	M	A	R
1.	133	MSA	459440	Rp,Fm	ON	X		X	X	
2.	134	MSA	459438 461011 465360	Rp,Bm,Fm	ON	X	X	X	X	X
3.	140	Willson	1210	Rp,Fm	ON	X		X	X	
4.	141	Willson	1211	Rp,Fm	ON	X	X	X	X	
5.	144	AO	R5030	Rp,Fm	ON	X		X	X	
6.	145	AO	R6030	Rp,Fm	ON	X		X	X	
7.	151	Norton	7506 7506M	Rp,Fm	ON	X		X	X	
8.	153	Norton	7406L 7406LM	Rp,Fm	ON	X		X	X	
9.	154	Sellstrom	315-F100	Rp,Fm	ON	X			X	
10.	154	Cover	1482-F100	Rp,Fm	ON	X			X	
11.	154	Safe-Tex	236-F100	Rp,Fm	ON	X			X	
12.	154	Eastern	E-450	Rp,Fm	ON	X			X	
13.	161	AO	R5056 R6056	Rp,Fm	ON	X	X	X	X	
14.	163	Cesco	94R20	Rp,Fm	ON	X		X	X	
15.	176	3M	9900	Ru	ON	X			X	
16.	179	U.S. Safety	150T10	Rp,Fm	ON	X		X	X	
17.	180	Cesco	95RC15	Rp,Fm	ON	X		X	X	
18.	187	MSA	461847	Rp,Fm	FF	X	X	X	X	X
19.	188	MSA	461845	Rp,Fm	FF	X		X	X	
20.	190	3M	9910	Ru	ON	X		X	X	
21.	193	U.S. Safety	150T11	Rp,Fm	ON	X	X	X	X	X
22.	194	Cesco	95RC16	Rp,Fm	ON	X	X	X	X	X
23.	196	Cover	1482-F108	Rp,Fm	ON	X	X	X	X	X

DUST, FUME, AND MIST RESPIRATORS APPROVED BY MSHA/NIOSH FOR ASBESTOS

PART II: Single Use Respirators

No.	Approval number TC-21C-	Approval Issued to	Model number(s)	Respirator type	Face-piece type	Type of Respiratory Protectic D F M A S
24.	132	3M	8710	Su	ON	X
25.	143	Willson	1400	Su	ON	X
26.	147	AO	R1050	Su	ON	X
27.	170A	Norton	7170	Su	ON	X
28.	173	3M	8800	Su	ON	X
29.	174	Binks	40-150	Su	ON	X
30.	195	Glendale	SU-1	Su	ON	X

Abbreviations Used In Lists

Respirator Type	Facepiece Type	Regulator, valve, or canister location
Rp - replaceable filter	ON - Orinasal	Fm - Facepiece mounted
Ru - reusable filter	FF - Full facepiece	Bm - Belt, chest, or side mounted
Su - single-use		

Type of Respiratory Protection

D - Respirators, either with replaceable or reusable filters, designed as respiratory protection against dusts (1) having an air contamination level not less than 0.05 milligram per cubic meter of air; or (2) dusts having an air contamination level not less than 2 million particles per cubic foot of air.

F - Respirators, with replaceable filters, designed as respiratory protection against fumes of various metals having an air contamination level not less than 0.05 milligram per cubic meter.

M - Respirators, with replaceable filters, designed as respiratory protection against mists of materials having an air contamination level not less than 0.05 milligram per cubic meter or 2 million particles per cubic foot.

A - Respirators, with replaceable filters, designed as respiratory protection against asbestos-containing dusts and mists.

S - Single-use respirators designed as respiratory protection against pneumoconiosis- and fibrosis-producing dusts, or dusts and mists.

R - Respirators, with replaceable filters, designed as respiratory protection against radon daughters, and radon daughters attached to dusts, fumes, and mists.

NAMES AND ADDRESSES OF SOME RESPIRATOR MANUFACTURERS AND DISTRIBUTORS

American Optical Corp., Safety Products Div., 100 Canal Street, Putnam, CT 06260.

Binks Manufacturing Co., 9201 W. Belmont Ave., Franklin Park, IL 60131.

Cesco Safety Products, Parmelee Industries, Inc., P. O. Box 1237, Kansas City, MO 64141.

Cover, H. S. Co., 107 East Alexander St., Buchanan, MI 49107.

Eastern Safety Equipment Co., 45-17 Pearson St., Long Island City, NY 11101.

Glendale Optical Co., 130 Crossways Park Drive, Woodbury, NY 11797.

Mine Safety Appliances Co., 400 Penn Center Blvd., Pittsburg, PA 15235.

Norton Safety Products, 2000 Plainfield Pike, Cranston, RI 02920.

Safe-Tex, Toronto, Ontario, CANADA.

Sellstrom Manufacturing Co., 59 E. Van Buren Street, Chicago, IL 60605.

3M Company, 3M Center, St. Paul, MN 55101.

United States Safety Service, Parmelee Industries, Inc., P. O. Box 1237, Kansas City, MO 64141.

Willson Products Division, ESB Incorporated, P. O. Box 622, Reading, PA 19603.

RESPIRATORY PUBLICATIONS AVAILABLE

RESPIRATORY PROTECTION - AN EMPLOYER'S MANUAL
DHEW (NIOSH) PUBLICATION NO. 78-193A

Stock No. 017-033-00326-2

Price $2.30

RESPIRATORY PROTECTION - A GUIDE FOR THE EMPLOYEE
DHEW (NIOSH) PUBLICATION NO. 78-193B

Stock No. 017-033-00327-1

Price $1.50

A GUIDE TO INDUSTRIAL RESPIRATORY PROTECTION
DHEW (NIOSH) PUBLICATION NO. 76-189

(Reprinted April 1979)

Stock No. and Price Unknown

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Price Unknown

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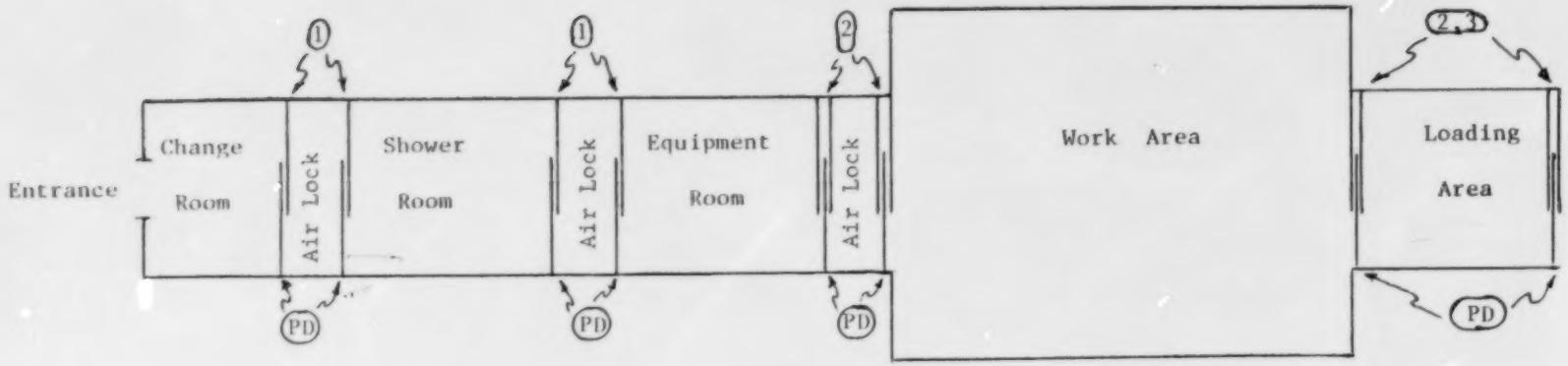
Division of Technical Services
National Institute for Occupational Safety and Health
Robert A. Taft Laboratories
4976 Columbia Parkway
Cincinnati, Ohio 45226

Please send self addressed mailing label.

SUGGESTED SCHEMATIC OF A TYPICAL DECONTAMINATION UNIT

FOR ASBESTOS REMOVAL



PD. Plastic Doors shall be constructed of 6 mil polyethylene plastic sheets. Air Locks shall have 1 foot minimum clearance between plastic doors.

1. Curtains shown in air locks adjacent to Shower Room shall be full height (floor to ceiling) with 2 curtains at each location and overlapping each other by 8 inch minimum.

2. Curtains shown in air lock adjacent to Work Area and in Loading Area shall be full height (floor to ceiling) with 3 curtains at each location and overlapping each other by two thirds (2/3) of opening width.

* All curtains shall be secured (taped and/or glued) completely across top and down one (1) side.

3. Plastic doors to Loading Area are never to be opened simultaneously.

NOTE: A linear arrangement may or may not suit to specific building layout. This drawing is not to scale and is schematic only.

ASBESTOS RESOURCE PERSONNEL

The following personnel are available to provide technical assistance to Oklahoma Public School Administrators concerning policies and procedures in detecting and controlling asbestos-containing materials in school buildings:

Mr. Paul Hallett, P.E. (SDE Asbestos Coordinator)
School Plant Services
State Department of Education
2500 North Lincoln Boulevard
Oklahoma City, Oklahoma 73105
(405) 521-3475

Mr. Dale McHard, Chief (EPA State Asbestos Program Contact)
Occupational and Radiological Health Service
State Health Department
P. O. Box 53551
Oklahoma City, Oklahoma 73152
(405) 271-5221

Mr. Charles McGlon, Director
Oklahoma State Labor Department
Occupational Safety and Health
Consultant Division
Suite 118 State Capital
Oklahoma City, Oklahoma 73105
(405) 521-2451 or
Toll Free 1-800-522-8076

Dr. Larry Thomas (EPA Regional Asbestos Coordinator)
EPA Region VI
First International Building
1201 Elm Street
Dallas, Texas 75270
(214) 767-2734

Supplemental Materials Available

Asbestos-Containing Materials in School Buildings: A Guidance Document (Parts I and II)
USEPA
Office of Toxic Substances
Washington, D. C. 20460

Asbestos in Ceiling Tiles
(A Supplement to EPA Guidance Documents)
USEPA or Oklahoma Department of Education

Guidelines for Preparation Of An Asbestos Correction Plan

Oklahoma State Department of Health

An Exposure Assessment Algorithm

Oklahoma State Department of Health

Selected Regulations

1. OSHA Regulation 29 CFR 1910.145(d)(4)

   Caution signs. Standard color of the background shall be yellow; and the panel, black with yellow letters. Any letters used against the yellow background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 of American National Standard Z53.1-1967.

ASBESTOS CONTRACTORS

The following contractors have indicated an interest in helping schools control asbestos by at least one of the following methods: encapsulating, removal or enclosure.

1. Add-More Insulation (405) 381-3193
   Joe Judkins
   Route 3 - Box 159
   Tuttle, Oklahoma 73089

2. James Mills Painting Contractors (918) 234-5040
   Stan Mills
   16328 East Marshall
   Tulsa, Oklahoma 74138

3. MIC (405) 327-4055
   Terry Murphy
   P. O. Box 801
   Alva, Oklahoma 73717

4. Occupational Health Safety Services (817) 569-0456
   John Breeding
   940 Kiowa
   Burkburnett, Texas 76354

5. Steamatic, Inc. (405) 528-3191
   Gregg Blackmon
   3937 N. Walnut
   Oklahoma City, Oklahoma 73105

6. Sublett Associates (405) 528-6365
   Jerry McKinley
   100 N. E. 26th
   Oklahoma City, Oklahoma 73105

7. Timberlake Construction Company (405) 840-2521
   William Kaiser
   P. O. Box 18297
   Oklahoma City, Oklahoma 73154

8. Utility Savers (405) 799-6335
   George McCutchan
   1605 South Broadway
   Moore, Oklahoma 73160

No recommendations are intended by the listing above.

APPENDIX H
September 1980